CLAIM SET

1. (Previously Presented) A liquid crystal monitor drive apparatus for driving a liquid crystal panel, comprising:

a connector for inputting an analog graphic signal, a clock signal, and horizontal and vertical synchronous signals;

a peripheral circuit coupled to an inverter for driving a back light unit;

an analog-digital converter arranged to convert the analog graphic signal from the connector into digital graphic data;

a scaler for scaling the definition and timing of the digital graphic data by adjusting the timing of the graphic data based on the clock signal and adjusting the horizontal and vertical synchronous signals from the connector to match with a timing of the liquid crystal panel;

a timing controller arranged to drive the liquid crystal panel based on the scaled digital graphic data, the adjusted clock signal, and the adjusted horizontal and vertical synchronous signals from the scaler; and

an integrated circuit chip, said integrated circuit chip includes at least two of said analog-digital converter, said scaler, and said timing controller.

2. (Original) The liquid crystal monitor drive apparatus as claimed in claim 1, wherein the integrated circuit chip further includes a frame memory connected with the scaler.

3. (Original) The liquid crystal monitor drive apparatus as claimed in claim 1, wherein the integrated circuit chip includes the analog-digital converter, the scaler and the timing controller.

4. (Original) The liquid crystal monitor drive apparatus as claimed in claim 3, wherein the integrated circuit chip further includes a frame memory connected with the scaler.

5. (Original) The liquid crystal monitor drive apparatus as claimed in claim 1, wherein there is no wiring between the analog-digital converter and the scaler or the scaler and the timing controller.

6. (Withdrawn) A liquid crystal monitor drive apparatus for driving a liquid crystal panel, comprising:

a connector for inputting a transmittance-minimized differential signal including graphic data from a computer;

a transmittance-minimized differential signal receiver arranged to generate digital graphic data based on the transmittance-minimized differential signal from the connector;

a scaler arranged to scale the definition of the digital graphic data;

a timing controller arranged to drive the liquid crystal panel based on the digital graphic data from the scaler; and

an integrated circuit chip, said integrated circuit chip including at least two of said transmittance-minimized differential signaling receiver, said scaler, and said timing controller.

7. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 6, wherein the integrated circuit chip further includes a frame memory connected with the scaler.

8. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 6, wherein the integrated circuit chip includes the transmittance minimize differential signaling receiver, the scaler, and the timing controller.

9. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 8, wherein the integrated circuit chip further includes a frame memory connected with the scaler.

10. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 6, wherein there is no wiring between the transmittance minimize differential signaling receiver and the scaler or the scaler and the timing controller.

11. (Withdrawn) A liquid crystal monitor drive apparatus including a monitor circuit block, the monitor circuit block made of a single printed circuit board comprising:

an analog-digital converter for inputting an analog graphic signal from a graphic card to convert the analog graphic signal from the graphic card into a digital graphic data;

a scaler for scaling the definition of the digital graphic data; and

a timing controller arranged to drive the liquid crystal panel based on the digital graphic data from the scaler;

wherein the monitor circuit block is connected to the liquid crystal panel without a transmission cable and a connector.

12. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 11, wherein the monitor circuit block further includes a frame memory connected with the scaler.

13. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 11, wherein the monitor circuit block further includes a wiring connected between the timing controller and the liquid crystal panel.

14. (Withdrawn) A liquid crystal monitor drive apparatus including a monitor circuit block, the monitor circuit block made of a single printed circuit board comprising:

an analog-digital converter for inputting an analog graphic signal from a graphic card to convert the analog graphic signal from the graphic card into a

digital graphic data;

a scaler for scaling the definition of the digital graphic data; and

a timing controller arranged to drive the liquid crystal panel based on the digital graphic data from the scaler;

wherein the monitor circuit block is connected to the liquid crystal panel through a transmission cable and a connector.

15. (Withdrawn) A liquid crystal monitor drive apparatus including a monitor circuit block, the monitor circuit block made of a single printed circuit board comprising:

a transmittance-minimized differential signal receiver for inputting a transmittance-minimized differential signal from a graphic card to generate digital graphic data based on the transmittance-minimized differential signal from the graphic card;

a scaler for scaling the definition of the digital graphic data; and

a timing controller arranged to drive the liquid crystal panel based on the digital graphic data from the scaler;

wherein the monitor circuit block is connected to the liquid crystal panel without a transmission cable and a connector.

16. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 15, wherein the monitor circuit block further includes a frame memory

connected with the scaler.

17. (Withdrawn) The liquid crystal monitor drive apparatus as claimed in claim 15, wherein the monitor circuit block further includes a wiring connected between the timing controller and the liquid crystal panel.

18. (Withdrawn) A liquid crystal monitor drive apparatus including a monitor circuit block, the monitor circuit block made of a single printed circuit board comprising:

a transmittance-minimized differential signal receiver for inputting a transmittance-minimized differential signal from a graphic card to generate digital graphic data based on the transmittance-minimized differential signal from the graphic card;

a scaler for scaling the definition of the digital graphic data; and

a timing controller arranged to drive the liquid crystal panel based on the digital graphic data from the scaler;

wherein the monitor circuit block is connected to the liquid crystal panel through a transmission cable and a connector.

19. (Previously Presented) The liquid crystal monitor drive apparatus as claimed in claim 1, wherein the peripheral circuit operates with a frequency signal much lower than that of the clock signal.